

WHAT IS CLAIMED IS:

1. A shared NIC device comprising:
an input interface connected to an InfiniBand Architecture (IBA) subnet,
the IBA subnet having at least two devices attached;
an output interface connected to the IBA subnet ;
a network input interface, the network input interface processing
information received from a network;
a network output interface, the network output interface processing
information to be sent to the network; and
a controller,
wherein when a packet is received at the input interface from a first of
the at least two devices where a destination address of the packet is a second
of the at least two devices, the controller sends the packet across the output
interface to the second at least two devices without sending the packet to the
network.
2. The device according to claim 1, further comprising a controller that
includes a storage device containing device addresses of at least some of the
at least two devices and a comparator, the comparator comparing the
destination address received with the device addresses.
3. The device according to claim 2, wherein the device addresses
comprise Media Access Control (MAC) addresses.

4. The device according to claim 1, wherein the network comprises a Fibre Channel network.
5. The device according to claim 1, wherein the network comprises a Small Computer System Interface (SCSI) network.
6. The device according to claim 1, wherein the network comprises an Asynchronous Transfer Mode (ATM) network.
7. The device according to claim 1, wherein the network comprises a Synchronous Optical Network (SONET).
8. The device according to claim 1, wherein the network comprises an Ethernet network.
9. The device according to claim 1, wherein the at least two devices are attached to the IBA subnet through at least one router.
10. The method according to claim 1, wherein the at least two devices comprise at least one of InfiniBand host devices and InfiniBand target devices.
11. A method for providing device-to-device connectivity using a shared InfiniBand Architecture (IBA) Network Interface Card (NIC) device comprising:

storing addresses at a shared NIC of at least two devices connected to the same IBA subnet, the shared NIC being connected to the IBA subnet and to a network;

receiving a packet at the shared NIC from a first at least two devices for transmission across the network;

comparing a destination address of the packet with the stored addresses; and

sending the packet to a second at least two devices on the IBA subnet if the destination address matches one of the stored addresses without sending the packet across the network.

12. The method according to claim 11, further comprising storing the device addresses at the shared NIC during an initialization of the IBA subnet.

13. The method according to claim 11, further comprising storing Media Access Control (MAC) addresses at the shared NIC of the at least two devices connected to the same IBA subnet and comparing a MAC destination address of the packet with the stored MAC addresses.

14. The method according to claim 11, wherein the network is an Asynchronous Transfer Mode (ATM) network, further comprising sending the packet to a second at least two devices on the IBA subnet if the destination address matches one of the stored addresses without sending the packet across the ATM network.

15. The method according to claim 11, wherein the network is a Synchronous Optical Network (SONET), further comprising sending the packet to a second at least two devices on the IBA subnet if the destination address matches one of the stored addresses without sending the packet across the SONET.

16. The method according to claim 11, wherein the network is a Fibre Channel network, further comprising sending the packet to a second at least two devices on the IBA subnet if the destination address matches one of the stored addresses without sending the packet across the Fibre Channel network.

17. The method according to claim 11, wherein the network is a Small Computer System Interface (SCSI) network, further comprising sending the packet to a second at least two devices on the IBA subnet if the destination address matches one of the stored addresses without sending the packet across the SCSI network.

18. The method according to claim 11, wherein the network is an Ethernet network, further comprising sending the packet to a second at least two devices on the IBA subnet if the destination address matches one of the stored addresses without sending the packet across the Ethernet network.

19. The method according to claim 11, wherein the at least two devices comprise at least one of InfiniBand host devices and InfiniBand target devices.

20. A system for connectivity of InfiniBand nodes using a shared Network Interface Card (NIC) device comprising:

at least two devices connected to the same InfiniBand subnet;

at least one shared NIC device, the at least one shared NIC device operatively connected between the subnet and at least one network; and

at least one switch operatively connected to the subnet, the at least one switch providing connectivity between the at least two devices and at least one shared NIC device on the subnet,

wherein when a packet is received by the at least one shared NIC device from a first at least two devices where a destination address of the packet is for a second at least two devices, the at least one shared NIC device sends the packet to the second at least two devices without sending the packet to the at least one network.

21. The system according to claim 20, further comprising the at least one shared NIC device operatively connected between the subnet and a Fibre Channel network.

22. The system according to claim 20, further comprising the at least one shared NIC device operatively connected between the subnet and a Small Computer System Interface (SCSI) network.

23. The system according to claim 20, further comprising the at least one shared NIC device operatively connected between the subnet and a Asynchronous Transfer Mode (ATM) network.

24. The system according to claim 20, further comprising the at least one shared NIC device operatively connected between the subnet and a Synchronous Optical Network (SONET).

25. The system according to claim 20, further comprising the at least one shared NIC device operatively connected between the subnet and an Ethernet network.

26. The system according to claim 25, further comprising at least one Ethernet switch, the at least one shared NIC device operatively connected to the Ethernet network through the at least one Ethernet switch.

27. The system according to claim 20, the at least two devices connected to the same InfiniBand subnet through at least one router.

28. The system according to claim 20, wherein the at least two devices comprise at least one of InfiniBand host devices and InfiniBand target devices.